Methodology FAQ

Banking on Climate Chaos: Fossil Fuel Finance Report 2023

This document provides additional detail on the methodology used in *Banking on Climate Chaos: Fossil Fuel Finance Report 2023*. The report was published on April 12, 2023 by Rainforest Action Network, BankTrack, Indigenous Environmental Network, Oil Change International, Reclaim Finance, Sierra Club, and Urgewald. *Banking on Climate Chaos 2023* is available for download at bankingonclimatechaos.org.

General Questions: Fossil Fuel Financing Data

How do you get the data?

The report assessed each bank's leading involvement in corporate lending and underwriting transactions — including project finance where data were available — between January 1, 2016, and December 31, 2022, inclusive. Transaction data were primarily sourced from Bloomberg Finance L.P. Additional project finance transactions in the LNG and coal power sectors were researched using the IJGlobal database.

Financing data are pulled using Bloomberg's league table (LEAG) function, which aggregates lending and underwriting (of share and bond issuances) led by a given bank. Using Bloomberg's industry-standard league table methodology, the total value of a deal is split among the banks leading the transaction. This methodology assigns banks league credit when financing is initially issued or renewed, provided the event meets certain criteria. A full explanation of the methodology for assigning league credit is available to Bloomberg subscribers.[1]

For deals identified using IJGlobal, the value of a deal is split among all banks on a given transaction, with allocations assigned by IJGlobal.

Why do I see differences between this year's data and last year's data?

There are a number of reasons that you might see differences between the data we published this year and what we published last year. While our methodology does not significantly change from year to year, additional research enables us to have a more robust dataset each year. Reasons for differences in our annual reports may include:

- Since our report includes the 60 largest banks by assets, each year the list of banks may change. This year, we included USBancorp and no longer included SuMi Trust due to changes in their reported assets.
- Additional research in our data sources has enabled us to include more fossil fuel companies this year: about 3200 issuers (companies) in this year's report as compared to 2700 issuers in this year's report.
- We re-research our fossil fuel adjusters each year (see below for more on adjusters). Changes in adjusters may increase or decrease the amount of league credit allocated to previously-reported deals.
- Our data providers update their databases with additional information about deals that may lead to changes in how league credit is allocated to banks or how fossil fuel companies are adjusted.
- Companies may merge, split, be acquired, change ownership, or change names. We generally update each year's dataset with the most recent listed name of a company.

[1] Enter LEAG <GO>, then click "Reports," then click "League Table Standards and Guidelines" to get the most current version of the document.

What about financing for diversified companies?

Each transaction is adjusted based on the particular company's involvement in the fossil fuel sector. For each company in the dataset, a segment adjuster was calculated or estimated. Segment adjusters detail a percentage of a company's operations in a specific activity in order to estimate how much financing is directed towards this activity.

The research consultancy Profundo calculated many of the segment adjusters used in this dataset, as described in the sections below (researched by Léa Pham Van, Ward Warmerdam, and Mara Werkman).

In general, in applying the adjusters to finance data, the adjuster depends on the particular entity borrowing money or issuing debt or equity. For instance, if a bank is credited for loaning $1,000,000 to a diversified oil and gas company, and 20 percent of that company's business is in tar sands, then the bank will be credited with a $200,000 loan to the tar sands sector. But if a bank is credited for loaning $1,000,000 to that company's tar-sands-only subsidiary, the full $1,000,000 will be counted.

Segment adjusters were calculated using the following sources: Bloomberg Finance L.P., Rystad Energy, Global Oil & Gas Exit List, Global Coal Exit List, company annual reports, and other publications as available. For all transactions in the expansion and sector datasets, annual adjusters were used. In this case, where no information could be identified for one or multiple years, the segment adjuster from the most recent year was applied, using 2016 at the earliest. For all other transactions, including those in the all fossil fuels data, one adjuster was applied to all seven years of data.

See the following sections (named, "How were these transactions adjusted?") for specifics on how adjusters were calculated for each league table.

All deals marked as "Green Instruments" were removed from the dataset; deals designated as "Sustainability Linked" or "Sustainability Bond/Loan" are included. This is a conservative choice since the precise definitions and requirements for these designations have not been standardized.

Where can I download the data?

Various datasets are available for download at www.bankingonclimatechaos.org, below the respective charts throughout the page. A list of companies included in the sector and expansion lists is also available.

How does banks' fossil fuel financing compare to their sustainable financing commitments?

Green or sustainable financing is beyond the scope of this report. In general, this is tricky to compare, because banks' sustainable finance commitments vary in accounting methodology and transparency, and in most cases are thus not directly comparable to the fossil fuel financing numbers in this report.

Most recently, Bloomberg New Energy Finance (BNEF) developed a dataset that compares banks' fossil fuel financing with their financing for low-carbon energy sources for 2021.[2] They found that low-carbon financing lagged behind fossil fuel financing; for every $1 of fossil fuel financing, banks provided .80 cents for low carbon sources. They suggest that the ratio should be closer to $4 on low carbon for every $1 on fossil fuels. Profundo conducted separate research using a more rigorous definition of low carbon but a smaller universe of banks and found that just 7% of bank financing goes to renewables.[3]

Which banks are covered and why?

This report covers the world's 60 biggest banks by assets, according to the S&P Global Market Intelligence ranking from April 2022.[4] Banks with little-to-no league credit for economy-wide financing were deemed irrelevant to this analysis. This resulted in the exclusion of three Japanese banks: Japan Post Bank (13th largest by assets globally), Norinchukin Bank (41st largest), and Resona Holdings (57th largest).

See the first appendix of the report for the full list of the 60 banks included. Due to changes in bank sizes, U.S. Bancorp is new to this edition of the report, replacing SuMi TRUST. Commerzbank (68th largest) replaces Huaxia Bank (63rd largest) for the second year in a row.

How much of a bank's business does fossil fuel financing represent?

These banks have many different business activities, and providing financing (lending and underwriting services) is just one of them. The chart below shows banks' fossil fuel financing as a % of their total economy-wide financing. We calculated these figures by looking at the unadjusted financing that these banks provided for the same asset classes that we research for fossil fuels companies. Total financing was researched on the Bloomberg terminal using the league table function, which is also the basis for our fossil fuel financing calculations. Some IJGlobal transactions are included in the fossil fuel financing numbers but not the overall financing numbers, which means the resulting percentages may be slight overestimations.

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[2] "Financing the Transition: Energy Supply Investment and Bank Financing Activity," *BloombergNEF* (blog), February 28, 2023, https://about.bnef.com/blog/financing-the-transition-energy-supply-investment-and-bank-financing-activity/

[3] "Just 7% of Global Banks' Energy Financing Goes to Renewables, New Data Shows," Rainforest Action Network, January 24, 2023, https://www.ran.org/press-releases/just-7-of-global-banks-energy-financing-goes-to-renewables-new-data-shows/.

[4] David Feliba and Rehan Ahmad, "The World's 100 Largest Banks, 2021," S&P Global, 12 April 2021.

Of course, with regards to the climate crisis, these percentages don't make a difference — what matters is the absolute amount of financing.

The 60 banks are ranked in this chart by the percentage of their 2016-2022 total financing made up by fossil fuel financing over that time period. "Financing" here refers to lending and the underwriting of corporate bonds, government bonds, and equity issuances. The chart also shows the figure for 2022 alone.

Bank	**Country**	**2016-2022 Fossil Fuel Financing as a % of Total Financing**	**2022 Fossil Fuel Financing as a % of Total Financing**
State Bank of India	India	25%	8%
CIBC	Canada	18%	15%
MUFG	Japan	17%	18%
Scotiabank	Canada	17%	15%
ICBC	China	14%	16%
China Everbright Bank	China	14%	11%
Industrial Bank	China	14%	9%
Agricultural Bank of China	China	13%	12%
SMBC Group	Japan	13%	16%
China CITIC Bank	China	12%	14%
RBC	Canada	12%	13%
Mizuho	Japan	12%	13%
Shanghai Pudong Development Bank	China	12%	11%
Ping An Insurance Group	China	12%	6%
Bank of Montreal	Canada	12%	10%
China Construction Bank	China	11%	9%
PNC	United States	11%	13%
Postal Savings Bank of China	China	11%	8%
Bank of Communications	China	10%	11%
China Minsheng Bank	China	10%	5%

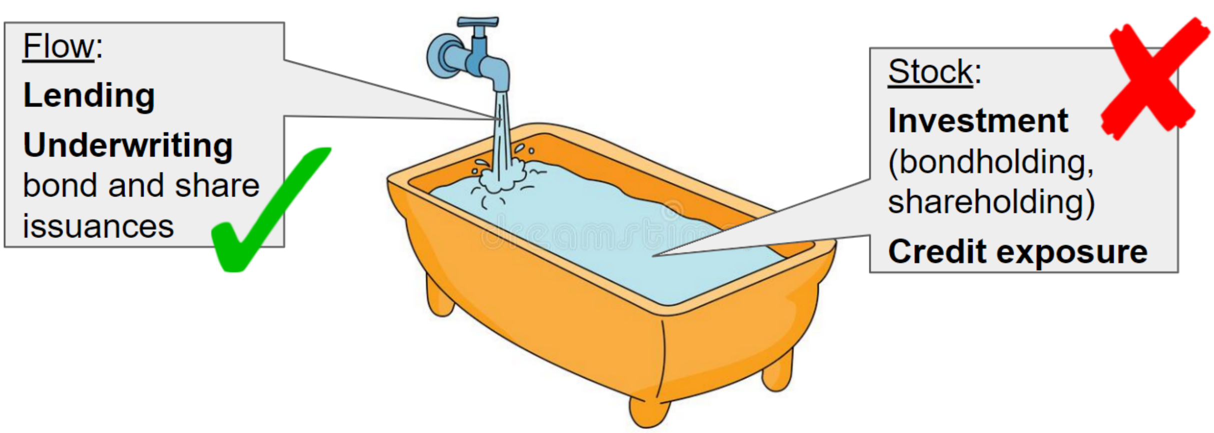
TD	Canada	10%	12%
KB Financial	South Korea	10%	4%
Wells Fargo	United States	10%	7%
Bank of China	China	9%	6%
China Merchants Bank	China	9%	9%
ING	Netherlands	9%	5%
US Bancorp	United States	8%	9%
Société Générale	France	8%	6%
BPCE/Natixis	France	8%	5%
Standard Chartered	Britain	7%	6%
BBVA	Spain	7%	5%
Citi	United States	7%	5%
JPMorgan Chase	United States	7%	5%
CaixaBank	Spain	6%	8%
Santander	Spain	6%	4%
Credit Suisse	Switzerland	6%	4%
Lloyds	Britain	6%	7%
ANZ	Australia	6%	6%
Crédit Agricole	France	6%	5%
Morgan Stanley	United States	5%	4%
Barclays	Britain	5%	3%
Intesa Sanpaolo	Italy	5%	7%
Bank of America	United States	5%	4%
BNP Paribas	France	5%	5%
Westpac	Australia	4%	2%
Rabobank	Netherlands	4%	3%
Goldman Sachs	United States	4%	3%
UniCredit	Italy	4%	4%

UBS	Switzerland	4%	2%
HSBC	Britain	3%	2%
NatWest	Britain	3%	1%
NAB	Australia	3%	2%
Nordea Bank	Finland	3%	2%
Commonwealth Bank	Australia	3%	1%
Danske Bank	Denmark	2%	1%
Commerzbank	Germany	2%	1%
Deutsche Bank	Germany	2%	2%
La Banque Postale	France	2%	0%
Crédit Mutuel	France	1%	1%
DZ Bank	Germany	<1%	<1%

Does this report cover fossil fuel investment?

No. Big banks are also significant supporters of the fossil fuel sector through investments made by their asset management arms (ownership of bonds and shares). In contrast, this report focuses on the investment banking part of a bank's business, in which it lends to and provides underwriting services for companies. Reclaim Finance and Urgewald, two of the authoring organizations of this report, conduct research on fossil fuel investments. Urgewald has a forthcoming report (April 2023) entitled *Investing in Climate Chaos*.

To use the bathtub analogy, this report's metric is a "flow" metric, whereas investment is a "stock" metric.



Which projects/companies in which countries are the banks funding via this fossil fuel financing?

Banking on Climate Chaos 2023 includes project-specific financing data where available, but as detailed on page 25 of the report, 96% of the financing assessed is not directed toward specific projects — rather, it is provided at the general corporate level to the recipient fossil fuel companies. Thus, we can identify where the funding is going by looking at the country of headquarters of the companies financed. Of course many companies have operations outside of their country of headquarters, so this is an imperfect measure. The information on the headquarter country of each fossil fuel company financed is available at https://www.bankingonclimatechaos.org/data2023.

Are banks consulted during the research process?

Yes. We engage with banks several times during the research process. Each bank is sent a questionnaire about their current policies, followed by their draft policy scores. They are also offered the opportunity to view a preliminary dataset of the deals attributed to them. They thus have the opportunity to provide feedback on our data prior to publication and to ask questions about our methodology. Annually, a number of banks provide feedback, which the authors take into consideration when refining the dataset. Ultimately, it is the final decision of the authors whether or not to make changes, and all changes are consistent with the established methodology.

It is our practice not to share with banks any comparative data which might give information about another bank. For that reason, we do not share the banks' rankings or the embargoed report in advance of publication.

Banking on Fossil Fuels League Table

Which fossil fuel companies are included?

Approximately 2,000 group-level companies that are either independent or parent company — totalling 3,210 companies when including relevant subsidiaries — that are involved in the extraction, transportation, transmission, distribution, combustion, trade, or storage of any fossil fuels or fossil-based electricity, globally, according to the Bloomberg Industry Classification Standard; *or* are on the Global Coal Exit List; *or* are on the Global Oil and Gas Exit List; *or* are in the scope of any of the other tables in the report, as described below. Only companies that received syndicated financing led by one of the 60 banks in scope are analyzed, which means that some fossil fuel companies are not included. See "Fossil Fuel Company Lists," available for download at http://bankingonclimatechaos.org/companies2023.

All companies are included that are classified under the following BICS categories, or that are marked in Bloomberg Terminal as having a recent percentage of assets, revenue, or operating income in these categories:

- Energy > **Oil & Gas**
    - Includes **Integrated Oils, Exploration & Production, Midstream - Oil & Gas, Refining & Marketing, Drilling & Drilling Support, Oilfield Services & Equipment**
- Materials > Materials > Metals & Mining > Coal Mining > **Thermal Coal**
- Materials > Materials > Metals & Mining > Mining Services > **Coal Support Services**
- Industrials > Industrial Services > Engineering & Construction > Infrastructure Construction > Energy Infra Construction > **Oil & Gas Infra Construction**
- **Industrials > Industrial Services > Engineering & Construction > Infrastructure Construction > Utility Line Construction > Gas Utility Line Construction**
- Industrials > Industrial Services > Transportation & Logistics > Marine Shipping > Tanker Shipping > **LPG & LNG Tanker Shipping**
- Industrials > Industrial Services > Transportation & Logistics > Marine Shipping > Tanker Shipping > **Oil Tanker Shipping**
- Industrials > Industrial Services > Transportation & Logistics > Rail Freight > Total Commodity - Rail > **Coai Freight - Rail**
- Utilities > Utilities > Elec & Gas Marketing & Trading > Elec & Gas Marketing & Trading > **Gas Marketing & Trading**
- Utilities > Utilities > Electric Utilities > Power generation > **Fossil electric generation**
- Utilities > Utilities > Gas & Water Utilities > **Gas Utilities**

How were these transactions adjusted?

1. Percentage fossil fuels for a given year calculated by Profundo (see description below).
2. Percentage fossil fuels calculated manually by asset or revenue percentage found in the most recent annual report. (This was only done for a select few companies, especially those with high financing totals. This includes percentages calculated in previous years of the report, including the largest companies categorized as ambiguous Utilities and Power Generation categories that otherwise had no available adjuster.)
3. Whichever of the following four is larger:*
    a. The “coal share of revenue” percentage listed in the Global Coal Exit List (GCEL) data. Where values are marked as greater than or less than a certain percentage, that percentage was used.
    b. The “fossil fuel share of revenue” percentage listed in the Global Oil and Gas Exit List (GOGEL) data. Where values are marked as greater than or less than a certain percentage, that percentage was used.
    c. The latest available all fossil fuels adjuster calculated by Profundo for the BOCC 2023 or BOCC 22 report
    d. The first available (from the following order) of the following percentages from Bloomberg Terminal data:
        i. % assets from 2022 filing >0
        ii. % revenue from 2022 filing >0
        iii. % operating income from 2022 filing >0

iv. % assets from 2021 filing >0
v. % revenue from 2021 filing >0
vi. % operating income from 2021 filing >0
vii. % assets from 2020 filing >0
viii. Largest >0 value of: % revenue from 2020 filing, sum of relevant most recent % revenue values as shown in Bloomberg's CCB BICS function as of 2021
ix. % operating income from 2020 filing >0
x. % assets from 2019 filing >0
xi. Largest >0 value of: % revenue from 2019 filing, sum of relevant most recent % revenue values as shown in Bloomberg's CCB BICS function as of 2020
xii. % operating income from 2019 filing >0
xiii. Largest >0 value of: % assets for "most recent" yearly filing as of 2020, % assets for "latest filing" as of 2020
xiv. Largest >0 value of: % revenue for "most recent" yearly filing as of 2020, % revenue for "latest filing" as of 2020
xv. Largest >0 value of: % operating income for "most recent" yearly filing as of 2020, % operating income for "latest filing" as of 2020
xvi. % assets for 2nd "most recent" yearly filing as of 2020
xvii. % revenue for 2nd "most recent" yearly filing as of 2020
xviii. % operating income for 2nd "most recent" yearly filing as of 2020
xix. % assets from 2018 filing >0
xx. % revenue from 2018 filing >0
xxi. % operating income from 2018 filing >0
xxii. % assets from 2017 filing >0
xxiii. % revenue from 2017 filing >0
xxiv. % operating income from 2017 filing >0
xxv. % assets from 2016 filing >0
xxvi. % revenue from 2016 filing >0
xxvii. % operating income from 2016 filing >0

4. The value of 2. (manually calculated adjuster) for the issuer's parent company, if deemed by the authors to be a reasonable approximation of the subsidiary*
5. The value of 3. for the issuer's parent company, if deemed by the authors to be a reasonable approximation of the subsidiary (parent company values in GCEL or GOGEL being the named parent company in GCEL or GOGEL, and only if the issuer company has a "coal share of revenue" or "fossil share of revenue" of NA, NI, or blank)*
6. The value of 2. (hand-checked) for the issuer's capital structure parent (CAST parent) company, if deemed by the authors to be a reasonable approximation of the subsidiary*
7. The larger value of 3.c. or 3d. for the issuer's capital structure parent (CAST parent) company, if deemed by the authors to be a reasonable approximation of the subsidiary*
8. For the small percentage of companies classified in a relevant fossil fuel sector, but for which none of the adjusters above were available, the average (mean) adjuster value of all other companies in the dataset that share the same primary category of the Bloomberg Industry Classification Standard (BICS) Level 5 Segment category. If there were fewer than three other companies in the same Segment with adjusters in the dataset, the mean from all companies with the same BICS Level 4 Sub Industry category

was used. If there were fewer than three other companies in the same Sub Industry with adjusters in the dataset, the mean from all companies with the same BICS Level 3 Industry category was used.

*If the sum of percentage adjusters for all fossil fuel sectors in the report as researched by Profundo (described in the following sections) is greater than the value used in 3 through 7 above, that percentage was used instead.

Percentage fossil fuels calculated by Profundo: For the 100 companies on the list of top fossil fuel expanders, and any of their subsidiaries, the research consultancy Profundo calculated annual adjusters, which were also used in the dataset aggregating overall financing to fossil fuels. These adjusters take into account a company's upstream, midstream, and downstream fossil fuel operations.

- For electric utility companies - first the proportion of a company's activities in the power sector was determined using the company's segment capital expenditures, assets or revenues as available. This figure was then further adjusted using the company's installed capacity that was based on fossil fuel feedstocks.
- For oil and gas companies – the proportion of the company's activities related to the sector were determined on the basis of their segment information.
- For the coal mining companies, the segment adjusters were primarily calculated based on a company's total coal capital expenditures, assets or revenues, as a percentage of the company's total capital expenditures, assets or revenues, especially in the case of companies that are only involved in mining or have a segment dedicated to coal mining and production.
- For many companies the segment adjusters for respective sub-sector formed the basis of the 'All fossil fuel' adjusters. However, where the sub-sector adjusters were focused on primarily upstream activities, the 'All fossil fuel' adjusters also included mid- and downstream operations.

Banking on Fossil Fuel Expansion League Table

Which fossil fuel companies are included?

We compiled a list of 100 top companies expanding fossil fuels:

- Upstream oil and gas: Top 54 companies by resources under development or field evaluation as of September 2022 (hereafter referred to as short-term expansion) and top 30 companies by exploration capital expenditure three-year average (2020-2022), totaling 60 companies due to overlap — these 60 companies are responsible for 77% of global short-term oil and gas expansion and 67% of capital expenditure on oil and gas exploration
  Source: Global Oil & Gas Exit List compiled by Urgewald
- Midstream oil and gas: Top 14 companies by LNG capacity proposed or under construction and top 12 companies by pipeline miles proposed or under construction,

totaling 25 additional companies due to overlap — 10 of these 25 companies are among the 60 top upstream oil and gas expansion companies
Source: Global Oil & Gas Exit List compiled by Urgewald

- Coal: Top 11 coal mining expansion companies and top 16 companies proposing new coal power plants, totaling 25 companies due to overlap
Source: Global Coal Exit List compiled by Urgewald

The full list of companies included is published as an online appendix to the report, titled "Fossil Fuel Company Lists," and is available for download at http://bankingonclimatechaos.org/companies2023.

How were these transactions adjusted?

For the 100 companies on the list of top fossil fuel expanders, and any of their subsidiaries, the research consultancy Profundo calculated annual adjusters, which were used in this dataset. These adjusters take into account a company's upstream, midstream, and downstream fossil fuel operations.

- For electric utility companies - first the proportion of a company's activities in the power sector was determined using the company's segment capital expenditures, assets or revenues as available. This figure was then further adjusted using the company's installed capacity that was based on fossil fuel feedstocks.
- For oil and gas companies – the proportion of the company's activities related to the sector were determined on the basis of their segment information.
- For the coal mining companies, the segment adjusters were primarily calculated based on a company's total coal capital expenditures, assets or revenues, as a percentage of the company's total capital expenditures, assets or revenues, especially in the case of companies that are only involved in mining or have a segment dedicated to coal mining and production.

Note that even though this list focuses on top fossil fuel expanders, the adjuster takes into account current operations only. This effectively undercounts financing for fossil fuel expansion. Moreover, the league table aggregates fossil fuel financing for top expansion companies, not necessarily solely for expansion projects. That also means that, for instance, zeroes in this league table do not indicate that a bank is not financing fossil fuel expansion, but rather that they are not leading financing for these 100 top companies.

Banking on Tar Sands, Arctic Oil and Gas, Offshore Oil and Gas, and Fracked Oil and Gas League Tables

Which fossil fuel companies are included?

Tar Sands Oil
Scope: Top 27 companies by tar sands production in 2021 plus short-term expansion, and the six companies with existing or proposed pipelines to carry tar sands oil out of Alberta in the past six years

Source: Global Oil & Gas Exit List compiled by Urgewald and Oil Sands Magazine[5]

Arctic Oil and Gas
Scope: Top 30 companies by Arctic oil and gas production[6] in 2021 plus short-term expansion
Source: Global Oil & Gas Exit List compiled by Urgewald

Offshore Oil and Gas
Scope: Top 30 companies by offshore oil and gas production in 2021 plus short-term expansion
Source: Rystad Energy AS provided by Oil Change International

Fracked Oil and Gas
Scope: Top 30 companies by fracked oil and gas production in 2021 plus short-term expansion and 10 key fracked oil and gas pipeline companies
Source: Global Oil & Gas Exit List compiled by Urgewald

The full list of companies included is published as an online appendix to the report, titled "Fossil Fuel Company Lists," and is available for download at http://bankingonclimatechaos.org/companies2023.

How were these transactions adjusted?

Prior to 2022, previous editions of this report adjusted these transactions based on a company's *reserves* in a given sector; beginning with *Banking on Climate Chaos 2022* we now use a company's sector *production*, because a) this is the metric used in the recently published Global Oil & Gas Exit List, and b) it serves as a more useful proxy for the activities supported by bank financing in a given year.

This research uses companies' oil and gas production as the basis to define the proportion of selected companies' activities respectively in Arctic oil, tar sands, offshore oil and gas, and shale (fracked) oil and gas. Information about selected companies' production in the respective sectors and their total production was collected from Rystad Energy and the Global Oil & Gas Exit List. Sector-specific and total production were retrieved for each selected company by year between 2016 and 2022 when financing was identified.

For each of the selected upstream oil and gas sectors, adjusters are primarily calculated based on the sector production that a selected company recorded, as a percentage of the total production of oil and gas of the company. When the company is vertically integrated in oil and gas, the adjuster is solely based on the company's production percentage in the relevant sector.

When the company is involved in other sectors in addition to oil and gas, the proportion of production is applied to the company's reported oil and gas business segment(s) capital expenditure, when available, as reported in the company's annual report for the respective year.

[5] "Inter Pipeline is included as of its purchase of the Milk River Pipeline in June 2021, and Kinder Morgan is included through September 2018, when it was the owner of the Trans Mountain Pipeline.
[6] This report uses the definition provided by the Arctic Monitoring & Assessment Programme (AMAP) of the Arctic Council, also used in the Global Oil & Gas Exit List. This definition covers onshore and offshore oil and gas production in the High Arctic and sub-Arctic regions defined by AMAP. "Geographical Coverage," AMAP, accessed January 2023.

If the company does not report capital expenditure by business segment, this calculation is made based on the business segment(s) assets. If assets are not reported by business segment, this calculation is made based on the reported segment(s) revenue.

Group-level adjusters are applied to both parent companies and subsidiaries that were found to have activities in the associated oil and gas sub-sector. When a subsidiary is identified to only have activities in a relevant upstream oil & gas sector, 100% is applied. For subsidiaries for which no link could be found related to the sector, 0% is applied. For financing or trading subsidiaries, group-level adjusters are applied.

For a midstream-focused subsidiary of an oil and gas company included for its upstream oil and gas activity, when it is identified to only have activities in a relevant oil & gas sub-sector, 100% is applied. When it is not possible to identify the proportion of activities linked to the different oil and gas sectors, group-level adjusters are applied.

For the key pipeline companies in the tar sands and shale (fracked) oil and gas sectors, adjusters are based on the estimated proportion of pipeline capacity transporting tar sands or shale oil and gas, respectively. When data on pipeline capacity is not available or not consistent, pipeline length was used. When a company also has other midstream and/or downstream activities reported in other segments, in the absence of relevant information, the assumption was made that the proportion of activity relating to shale and tar sands is the same as is calculated for the pipeline segment. Therefore, the same proportion was applied to the other midstream and downstream segments.

For a downstream company, the assumption is made that the company sources its input from its parent company. Therefore, group-level adjusters are applied.

Explanation provided by Profundo.

Banking on Amazon Oil and Gas League Table

Which fossil fuel companies are included?

This report analyzes transactions with 21 companies for which there is evidence of **direct involvement** in oil and gas extraction in the Amazon biome in Brazil, Ecuador, Peru, and Colombia as researched by Stand Research Group. Companies with a direct relationship to the region include block operators and state-run oil companies. These companies have operations in the Amazon biome according to the definition detailed by the Amazonian Georeferenced Socio-Environmental Information Network (**RAISG**).[7]

How were these transactions adjusted?

These companies were either assigned a 100% direct relationship or given a proportion based on the capital expenditures, operating costs, and production costs associated with any Amazon oil and gas projects. To qualify as 100% direct, a company must have the majority of its oil and

[7] “Amazonia Under Pressure 2020,” *RAISG* , 2021, https://www.raisg.org/en/publication/amazonia-under-pressure-2020/.

gas projects and all of its major producing blocks in the Amazon. Adjusters were researched by Stand Research Group

Banking on LNG League Table

Which fossil fuel companies are included?

Scope: Top 30 companies by attributable capacity in current and planned LNG import or export terminals worldwide
Source: Global Energy Monitor and Global Oil & Gas Exit List compiled by Urgewald

The full list of companies included is published as an online appendix to the report, titled "Fossil Fuel Company Lists," and is available for download at http://bankingonclimatechaos.org/companies2023.

How were these transactions adjusted?

Segment adjusters for LNG included all LNG-related activities at the midstream level. This excludes natural gas production and regasification, which form part of LNG supply chains but also includes other parts of the natural gas sector that are unrelated to LNG. The methodology used to calculate LNG segments was primarily based on segment assets, when a specific LNG segment was reported by the companies themselves. In the case where total LNG assets could be estimated from subsidiaries whose assets in LNG could be identified, these were calculated as a percentage of the group company's total assets. If this could not be identified, the adjuster was calculated based on LNG production capacity as a proportion of the group's total oil and gas production capacity. If production capacity could not be identified, the adjuster was calculated based on LNG sales as a proportion of total revenue. If no activities could be found in LNG for subsidiaries, 0% was applied for the subsidiary.

Explanation provided by Profundo.

Banking on Coal Mining League Table

Which fossil fuel companies are included?

Scope: Top 30 companies by annual coal production plus coal mining capacity expansion plans
Source: Global Coal Exit List compiled by Urgewald

The full list of companies included is published as an online appendix to the report, titled "Fossil Fuel Company Lists," and is available for download at http://bankingonclimatechaos.org/companies2023.

How were these transactions adjusted?

Segment adjusters for coal mining were primarily calculated based on a company's total coal capital expenditures, as a percentage of the company's total capital expenditures, especially in the case of companies that are only involved in mining or have a segment dedicated to coal mining and production. In the context where coal capital expenditures could not be determined, the segment was calculated based on the company's coal assets as a percentage of total assets. When no specific assets could be determined, revenues were used. When no specific revenues could be determined, an estimation of coal mining percentage was made based on the total number of various operations, and a 1:1 percentage of operations related to coal mining. For example, if the company has eight different subsidiaries in different sectors, of which five or six are coal mining subsidiaries, a percentage of 62.5% or 75% was applied.

In the same context where no assets or revenues could be found, but the company seemed clearly only or primarily involved in coal mining, with no specific indicator for other activities, 100% was applied. If a subsidiary was found to not be involved in coal mining, 0% was applied.

For companies that are involved both in coal mining and coal power and where assets could not be identified, adjuster for coal mining was based on the revenue percentage from coal. However, these revenues only account for coal that is sold to third-parties, whereas these companies likely use the coal that is mined primarily for their own coal-fired power assets. Therefore, in these cases, coal mining segments are likely much larger than represented by the adjusters here calculated.

Explanation provided by Profundo.

Banking on Coal Power League Table

Which fossil fuel companies are included?

Scope: Top 30 companies by installed plus planned coal power capacity
Source: Global Coal Exit List compiled by Urgewald

The full list of companies included is published as an online appendix to the report, titled "Fossil Fuel Company Lists," and is available for download at http://bankingonclimatechaos.org/companies2023.

How were these transactions adjusted?

Segment adjusters for coal power were calculated as coal-fired power capacity as a percentage of the company's total power capacity. In the context where a company was involved in other activities than energy generation and distribution, the coal-fired capacity percentage was applied to electricity generation or power segment of the company as a percentage of capital expenditures.

If a subsidiary was found to not be involved in power or not have any capacity in coal-fired power, 0% was applied.

Subsidiaries that are only involved in transmission of electricity but are part of a group that includes coal generation capacity, the parent company level adjuster was applied.

If no adjusters could be found for coal capacity or coal-power capital expenditures, assets from coal-power generation was applied, as a percentage of total assets. If no adjusters could be found for coal capacity or coal-power assets, revenues from coal-power generation was applied, as a percentage of total revenues. When no coal-power capacity, assets or revenues could be identified, segment was calculated based on thermal capacity or assets, as a percentage of total capacity or assets.

For companies that are involved both in coal mining and coal power, the coal capacity percentage was applied to assets or, if not available, to annual revenues.

Explanation provided by Profundo.

Policy Analysis

How are banks' fossil fuel policies analyzed?

Policy assessments are available at https://www.bankingonclimatechaos.org/policy2023. This year's edition of *Banking on Climate Chaos* excerpts policy assessments from the Oil and Gas Policy Tracker and Coal Policy Tool, both led by Reclaim Finance, one of this report's authoring organizations. See oilgaspolicytracker.org and coalpolicytool.org for full assessments of banks' fossil fuel exclusion policies, as well as parallel assessments of other banks, insurance companies, and asset managers. In addition, the report excerpts from the Decarbonization Targets Tracker, led by BankTrack, an authoring organization. For details on how to read their tracker, see http://bankingonclimatechaos.org/tracker-guide. For full assessment visit https://www.banktrack.org/ourproject/tracking_the_net_zero_banking_alliance.